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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,555	09/22/2003	Dirk DeGronckel	1316N-001662	9987
27572	7590	09/08/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.				SY, MARIANO ONG
P.O. BOX 828				ART UNIT
BLOOMFIELD HILLS, MI 48303				PAPER NUMBER
				3683

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/667,555	DEGRONCKEL ET AL.	
Examiner	Art Unit		
Mariano Sy	3683		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 12 August 2004.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) 3 and 10-12 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1,2,4-9 and 13-16 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01082004.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date.       .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other:       .

### **DETAILED ACTION**

1. Applicant's election without traverse of Specie A, fig. 1, 4, and 5, claims 1, 2, and 4-16 in the reply filed on August 12, 2004 is acknowledged. Examiner disagrees that claims 10-12 are generic claims. Claim 10 recites "a first inner cylinder ---- a second inner cylinder" in lines 4-6 reads on Specie B, fig. 2, 6, and 7. Applicant is advised that claims 3 and 10-12 are drawn to non-elected claims.

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "26" and "30" have both been used to designate --lower work chamber-- in fig. 4; reference characters "26" and "30" have both been used to designate --valve-- in fig. 5. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 2, 4-9, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the upper working chamber" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the lower working chamber" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the adjustable valve portion" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the outer tube" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the inner tube" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the outer tube" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the adjustable valve" in line 21. There is insufficient antecedent basis for this limitation in the claim.

Claims 8 and 9 are indefinite due to their dependency on claim 7.

Claim 14 recites the limitation "the damper" in line 1. It is unclear if applicant is referring to --the adjustable valve portion--.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4-6, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizumukai et al. (U.S. Patent Number 4,561,524) in view of Eddy, Jr. (U.S. Patent Number 4,682,675).

Re-claims 1 and 2 Mizumukai et al. disclosed, as shown in fig. 1, a damper for absorbing vibration transmitted from an un-sprung mass to a sprung mass on a vehicle, the damper comprising: an outer cylinder 12; an inner cylinder 14, a space between the inner cylinder and outer cylinder defining a reserve chamber C; a valve 16 slidingly engaging an inner wall of the inner cylinder; a rod 18 attached to the valve and

extending along an axis of the outer and inner cylinders; and an adjustable valve 50 positioned inside the outer cylinder that has a cylindrical outer surface that is axially aligned with inner and outer cylinders, the adjustable valve fluidly connecting an upper working chamber A and a lower working chamber B with the reserve chamber, the adjustable valve providing a variable flow resistance to fluid flowing between upper working chamber and the reserve chamber.

However Mizumukai et al. failed to disclose the adjustable valve providing a variable flow resistance to fluid flowing between upper working chamber and the reserve chamber responsive to an external signal.

Eddy, Jr. teaches the use of sensor 200 (accelerometer) with the shock absorber.

It would have been obvious to one of ordinary skill in the art to have merely utilized the known sensor (accelerometer) into the damper of Mizumukai et al., in view of the teaching of Eddy, Jr., in order to reduce stiffness of the damper to absorb more of the wheel's vertical energy and reducing energy transferred to the vehicle's frame.

Re-claims 4-6 Mizumukai et al. disclosed, as shown in fig. 1, further comprising a lower support 50 positioned within and supported by the outer cylinder, the lower support having an aperture to support the adjustable valve portion; a valve entrance area fluidly connected to a valve entrance of the adjustable valve portion and fluidly connected to the upper working chamber, the valve entrance area passing through the lower support; wherein the lower support further comprises a passage 68 that connects a valve exit 66 of the adjustable valve portion with the reserve chamber.

Re-claims 13-15 Mizumukai et al. disclosed, as shown in fig. 1, a vehicle comprising: a sprung mass; an un-sprung mass; a damper connecting the sprung mass to the un-sprung mass (col. 2, lines 45-48), the damper further including: an outer cylinder 12; an inner cylinder 14, an area between the inner and outer cylinders defining a reserve chamber C; a rod guide 20 supporting first ends of the inner and outer cylinders; a rod 18 slidably engaged with the rod guide, a first portion of the rod extending external to the inner cylinder and a second portion of the rod extending inside the inner cylinder; a valve 16 attached to the second portion of the rod, the valve slidably engaged with an inner wall of the inner cylinder, an area inside the inner cylinder between the valve the rod guide defining an upper working chamber A, an area on a side of the valve distal from the rod guide and inside the inner cylinder defining a lower working chamber B; an adjustable valve portion 52, coaxial with the inner and outer cylinders and is positioned inside the outer cylinder; a lower support 50 engaged with an inside wall of the outer cylinder, the lower support having an aperture that supports the adjustable valve portion, and fluidly communicating the upper working chamber with the reserve chamber, the adjustable valve portion providing a variable flow resistance to fluid flowing between upper working chamber and reserve chamber.

However Mizumukai et al. failed to disclose the adjustable valve providing a variable flow resistance to fluid flowing between upper working chamber and the reserve chamber responsive to an external signal.

Eddy, Jr. teaches the use of sensor 200 (accelerometer) with the shock absorber.

It would have been obvious to one of ordinary skill in the art to have merely utilized the known sensor (accelerometer) into the damper of Mizumukai et al., in view of the teaching of Eddy, Jr., in order to reduce stiffness of the damper to absorb more of the wheel's vertical energy and reducing energy transferred to the vehicle's frame.

Re-claim 16 Mizumukai et al. disclosed, as shown in fig. 1, a damper for absorbing vibration transmitted from an un-sprung mass to a sprung mass on a vehicle, the damper comprising: a cylindrical outer housing 12 containing a first fluid chamber A, B being coaxially aligned with a second fluid chamber C; and an adjustable valve portion 52 connecting the first fluid chamber with the second fluid chamber, the adjustable valve portion providing a variable flow resistance between the first and second fluid chambers and the adjustable valve portion having a cylindrical outer surface axially aligned with the first fluid chamber and the second fluid chamber.

However Mizumukai et al. failed to disclose the adjustable valve providing a variable flow resistance to fluid flowing between first fluid chamber and second fluid chamber responsive to an external signal.

Eddy, Jr. teaches the use of sensor 200 (accelerometer) with the shock absorber.

It would have been obvious to one of ordinary skill in the art to have merely utilized the known sensor (accelerometer) into the damper of Mizumukai et al., in view of the teaching of Eddy, Jr., in order to reduce stiffness of the damper to absorb more of the wheel's vertical energy and reducing energy transferred to the vehicle's frame.

6. Claim 7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

H.T. Szostak (U.S. Patent Number 3,127,958) disclosed a shock absorber with relief valve.

Sirven (U.S. Patent Number 4,054,277) disclosed a hydraulic shock absorber.

Kobayashi et al. (U.S. Patent Number 4,971,180) disclosed a shock absorber.

Cazort et al. (U.S. Patent Number 5,462,140) disclosed an acceleration sensitive shock absorber.

Richardson (U.S. Patent Number 5,598,903) disclosed an acceleration sensitive strut.

Huang (U.S. Patent Number 5,618,248) disclosed a double-acting hydraulic cylinder.

Shirley et al. (U.S. Patent Number 6,334,516 B1) disclosed an acceleration sensitive twin tube shock absorber.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 703-308-3427.

The examiner can normally be reached on Mon.-Fri. from 9:00 A.M. to 3:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 26, 2004

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8/2/2004

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